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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/118,234	07/17/1998	RUDI MAYER	10191/789	8795
26646	7590	01/29/2004	EXAMINER	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			TANG, KENNETH	
			ART UNIT	PAPER NUMBER
			2127	11

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/118,234

Applicant(s)

MAYER ET AL.0101

Examiner

Kenneth Tang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☒ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. In view of the Appeal Brief filed on 10/14/03, PROSECUTION IS HEREBY REOPENED. New grounds of rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. Claims 1-14 are subject to examination.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-7 and 9-14 are rejected under 35 U.S.C. 102(b) as being unpatentable by Terada et al. (hereinafter Terada) (US 5,561,742).**

3. As to claims 1 and 10, Terada teaches a control unit for a system and a method of operating that control unit, having a plurality of activatable modules for generating information as a function of at least one of a plurality of states of the system, comprising:

- a first storage device for storing information relating to a mutual interference of the modules (the information of the equation for determining mutual interference is " $Y_a(\max)' - Y_b(\min)' < d$ " and stored, col. 7, line 61, and col. 6, lines 15-21, "Interference Prevention method", see Title);
- a second storage device for storing state information regarding the modules, the state information indicating which of the modules are currently activated (*"It is judged whether the following equation (2) is established by using the equation (1) on the basis of the maximum value  $Y_a(\max)'$  of the spatial region thus estimated, and a minimum value  $Y_b(\min)'$  of the current spatial region of the robot B, which is transmitted from the controller C3 of the robot B and stored in the memory means of the controller C2 of the robot A .", col. 7, lines 53-60).*
- a scheduler for activating at least one of the modules and determining as a function of the information stored in the first storage device and the information stored in the second storage device whether mutual interference occurs if an additional module is activated, wherein the scheduler prevents a simultaneous activation of modules that interfere with each other (*"The robot receiving the data on a maintained spatial region determines whether or not the spatial region crosses the spatial region of the transmitting-side robot, and it is determined whether it is ensured that both robots have no interference with each*

*other. If the receiving-side robot finds that the spatial region of the receiving-side robot crosses the spatial region of the transmitting-side robot, the receiving-side robot is stopped operating, and is controlled so as to be kept in a waiting state until the spatial region of the receiving-side robot is moved depending on the operation of the transmitting-side robot, so that the spatial regions of both robots do not cross each other.”, col. 2, lines 42-53, and Fig. 5, items S1-S6).*

4. As to claims 2 and 11, Terada teaches the claimed invention wherein the system includes one of a motor vehicle, an engine, and a transmission (“motor”, col. 6, line 44).

5. As to claims 3 and 12, Terada teaches wherein the scheduler prevents the simultaneous activation of modules that interfere with each other by preventing an activation of the additional module (see rejection of claim 1). Modules will not get activated unless it satisfies the condition/equation for interference.

6. As to claims 4 and 13, Terada teaches wherein the scheduler prevents simultaneous activation of modules that interfere with each other by interrupting an activated module (“interrupted”, col. 7, line 35).

7. As to claims 5 and 6, Terada teaches wherein the first storage device stores information regarding which modules interfere with one another when they are simultaneously activated (see

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rejection of claim 1). Modules will not get activated unless it satisfies the condition/equation for interference and all data state information is stored in memory.

8. As to claims 7 and 14, Terada teaches wherein each one of the modules and the scheduler includes a program to be processed by a microprocessor (*"CPU", Fig. 4, item 10*).

9. As to claim 9, Terada teaches wherein one of a set of functions appearing to a user as one unit and another set of functions being used to control a uniform function is divided into the modules and are managed separately by the scheduler (*"The robot receiving the data on a maintained spatial region determines whether or not the spatial region crosses the spatial region of the transmitting-side robot, and it is determined whether it is ensured that both robots have no interference with each other. If the receiving-side robot finds that the spatial region of the receiving- side robot crosses the spatial region of the transmitting-side robot, the receiving-side robot is stopped operating, and is controlled so as to be kept in a waiting state until tire spatial region of the receiving-side robot is moved depending on the operation of the transmitting-side robot, so that the spatial regions of both robots do not cross each other."*, col. 2, lines 42-53, and Fig. 5, items S1-S6).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**10. Claim 8 is rejected under 35 U.S.C. 103(a) as being obvious over Terada et al. (hereinafter Terada) (US 5,561,742).**

11. As to claim 8, Terada fails to explicitly teach wherein each one of the first storage device and the second storage device includes one of a plurality of tables and a plurality of matrices. However, "Official Notice" is taken that both the concept and advantages of providing that memory can be a plurality of data tables and matrices. It is well known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a plurality of data tables and matrices to the existing system for the reason of increasing control and organization by providing data structure.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (703) 305-5334. The examiner can normally be reached on 8:30AM - 7:00PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 746-7140.

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A handwritten signature in black ink, appearing to read 'Meng-Al T. An', with a long horizontal flourish extending to the right.

Kt  
1/17/04

**MENG-AL T. AN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**